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| 09/814,194                    | 03/21/2001  | Edward L. Grivna     | 0325.00438          | 2370             |
| 21363                         | 7590        | 12/20/2004           | EXAMINER            |                  |
| CHRISTOPHER P. MAIORANA, P.C. |             |                      | WANG, TED M         |                  |
| 24840 HARPER                  |             |                      | ART UNIT            | PAPER NUMBER     |
| ST. CLAIR SHORES, MI 48080    |             |                      | 2634                |                  |

DATE MAILED: 12/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/814,194

Applicant(s)

GRIVNA ET AL.

Examiner

Ted M Wang

Art Unit

2634

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-15 and 17-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-9, 14, 15 and 17-22 is/are rejected.
- 7) ☒ Claim(s) 6 and 10-13 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 March 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Response to Amendment***

1. The indicated allowability of claims 1-15 and 17-22 are withdrawn in view of the newly discovered reference(s) to Brewer et al. (US 6,226,269). Rejections based on the newly cited reference(s) follow.

### ***Drawings***

2. The drawings are objected to because

- The clear formal drawings Figs.1 –5 are required. For example, the characters in Fig.5 are too small to see.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 15 and 17-20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to

- With regard claim 15, "predetermined character is orthogonal to an encoded data and special character set" as recited has not been taught in the specification. The specification teaches only "replacing one or more characters of a data stream with a predetermined character" as recited.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Note: For further examination, the examiner discards the limitation of "predetermined character is orthogonal to an encoded data and special character set" set forth in the above paragraph.

6. Claims 1-5, 7-9, 14, 15, 17, and 19-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brewer et al. (US 6,226,269) in view of Tarrab et al. (US 5,195,093).

- With regard claim 1, Brewer et al. discloses an apparatus comprising a first circuit (Fig.3A element 312 and Fig.3B element 362) configured to generate a first select signal (Fig.3A element 312 output to element 318 and Fig.3B element 362 output to element 368), a second select signal (Fig.3A element 312 output to element 320 and Fig.3B element 370) and a first data stream (Fig.3A element 312 output to element 318 input terminal A and Fig.3B element 362 output to

element 368 input terminal A) in response to an input data stream (Fig.3A element 310 and Fig.3B element 360);

and a second circuit (Fig.3A element 318, 320, and 322, and Fig.3B element 368, 370, and 372) configured to generate an output data stream (Fig.3A element 324 and Fig.3B element 374) response to said first data stream, said first select signal and said second select signal, wherein said second circuit is configured to replace one or more characters of said first data stream (column 4 line 16 – column 5 line 60),

wherein said second circuit comprises a first multiplexer (Fig.3A element 318 and Fig.3B element 368) configured to (i) multiplex said first data stream and an error injection path (Fig.3A elements 320 and 322 to 318 path and Fig.3B elements 370 and 372 to 368 path) in response to said first select signal to present said output data stream (column 4 line 16 – column 5 line 60) and (ii) generate said output data stream in response to a first and a second disparity signal (column 4 line 16 – column 5 line 60).

Brewer et al. discloses all of the subject matter as described above except for specifically teaching the first circuit generate output signals in response to both an input data stream and an exception signal.

However, Tarrab et al. teaches the first circuit generate output signals in response to both an input data stream and an exception signal (Fig.3 elements 27, 43, and 45 and column 4 line 52 – column 5 line 38).

It is desirable to detect a transmitter exception in a data communication system so as to improve the data transferring reliability (column 6 lines 6-10). Therefore, It would have been obvious to one of ordinary skill in the art at the time of the invention was made to include the method as taught by Tarrab et al. in which, detecting a transmitter exception, into Brewers' data transmission method in the detection circuit in order to improve the data transferring reliability.

- With regard claim 2, the limitation that the exception signal comprises a transmitter exception signal is contained in claim 1. The explanation of all the limitation is already addressed in the above paragraph.
- With regard claim 3, Brewer et al. further discloses the limitation that second circuit is configured to replace said one or more characters with a predetermined character to indicate the presence and duration of an exception condition in a transmission station (column 4 line 16 – column 5 line 60).
- With regard claim 4, Tarrab et al. further teaches that the transmitter exception could be a software interrupt (column 6 lines 19-45).
- With regard claim 5, Brewer et al. further discloses the limitation that wherein said second circuit is further configured to present said predetermined character as either (i) a positive disparity character or (ii) a negative disparity character, in response to said first and second select signals (column 2 line 45 – column 3 line 8 and column 4 line 16 – column 5 line 60).
- With regard claim 7 Brewer et al. further discloses the limitation that wherein said first circuit comprises a detection-encoder circuit (Fig.3A elements 304 and 364

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and column 4 lines 14-67) and said second circuit comprises an error injection circuit (Fig.3A elements 320 and 332 and column 4 line 27 - column 5 line 48).

- With regard claim 22, all limitation is contained in claims 1, 3, and 5. The explanation of all the limitation is already addressed in the above paragraph.
- With regard claim 8, all limitation is contained in claims 1, 3, and 5. The explanation of all the limitation is already addressed in the above paragraph.
- With regard claim 9, all limitation is contained in claims 1, 3, and 5. The explanation of all the limitation is already addressed in the above paragraph.
- With regard claim 14, which is a means uncton claim related to claim 1, all limitation is contained in claim 1. The explanation of all the limitation is already addressed in the above paragraph.
- With regard claim 15, which is a method claim related to claim 1, all limitation is contained in claim 1. The explanation of all the limitation is already addressed in the above paragraph.
- With regard claim 17, which is a method claim related to claim 5, all limitation is contained in claim 5. The explanation of all the limitation is already addressed in the above paragraph.
- With regard claim 19, which is a method claim related to claim 4, all limitation is contained in claim 4. The explanation of all the limitation is already addressed in the above paragraph.

- With regard claim 20, Brewer et al. discloses all of the subject matter as described above except for specifically teaching step (b) is repeated for a duration of said transmitter exception.

However, Tarrab et al. teaches step (b) is repeated for a duration of said transmitter exception (Fig.2 elements t2a – t2b, and Fig.4 elements t2a – t2b, and column 4 line 52 – column 5 line 38, and column 7 line 61 – column 8 line 32).

It is desirable to repeat the step (b) for a duration of said transmitter exception so as to improve the data transmission reliability (column 6 lines 6-10). Therefore, It would have been obvious to one of ordinary skill in the art at the time of the invention was made to include the method as taught by Tarrab et al. in which, repeated for a duration of said transmitter exception, into Brewers' data transmission method in the hub in order to improve the data transmission reliability.

- With regard claim 21, all limitation is contained in claim 15. The explanation of all the limitation is already addressed in the above paragraph.

#### ***Allowable Subject Matter***

7. Claims 6 and 10-13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.



**Conclusion**

8. Reference US 5,881,280 is cited because they are put pertinent to the exception propagation in serial transport interface. However, none of references teach detailed connection as recited in claim.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ted M Wang whose telephone number is (571) 272-3053. The examiner can normally be reached on 8:30 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on (571) 272-3056. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-0377.

Ted M Wang  
Examiner  
Art Unit 2634

Ted M. Wang



**SHUWANG LIU**  
**PRIMARY EXAMINER**